

REMARKS

Claims 1-27 are pending in the application.

Claims 1-27 are rejected.

Claims 5, 6, 14, and 20 are amended to correct typographical errors.

Claims 7, 9-13, 15-20 and 22-27 are amended to correct antecedent basis problems.

The Applicants respectfully assert that the amendments to Claims 5-7, 9-14, 15-20 and 22-27 and incorporated by reference in any claims depending therefrom, are not narrowing amendments made for a reason related to the statutory requirements for a patent that will give rise to prosecution history estoppel. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 122 S. Ct. 1831, 1839-40, 62 U.S.P.Q.2d 1705, 1711-12 (2002); 234 F.3d 555, 566, 56 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2001).

I. CLAIM OBJECTIONS

Claim 20 is objected to because of a typographical error. Claim 20 is amended to correct the error pointed out by the Examiner.

II. REJECTION UNDER 35 U.S.C. § 112

The Examiner rejected Claims 14 and 20 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner states that both Claims 14 and 20 have antecedent basis problems. The Applicant has amended Claims 5, 6, 14, and 20 to correct informalities. Although not cited by the Examiner, the Applicant has amended Claims 7, 9-13, 15-20 and 22-27 to correct antecedent basis problems. Therefore, the Applicant respectfully asserts that the rejections of Claims 5-7,

9-20 and 22-27 under 35 U.S.C. §112, second paragraph, are traversed by these amendments.

III. REJECTION UNDER 35 U.S.C. § 102(b)

The Examiner rejected Claims 1-27 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,473,599 to *Li et al.* (hereafter "*Li*").

For a reference to anticipate a claimed invention, the reference must disclose every aspect of the claimed invention. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

The Examiner agrees for the rejection of method Claims 14-20 only and states that the arguments for rejecting these claims cover apparatus Claims 1-13 and computer program-product Claims 21-27.

The Address Resolution Protocol (ARP) is a TCP/IP protocol used to obtain a node's physical address. Typically, a client station broadcasts an ARP request onto the network with the IP address of the target node it wishes to communicate with and the node with that address responds by sending back its physical address so that packets can be transmitted. ARP returns the layer 2 address for a layer 3 address. Since an ARP gets the message to the target machine, one might wonder why bother with IP addresses in the first place. The reason is that ARP requests are normally broadcast (multicast) onto the network, requiring every station in the sub-net to process the request. The present invention uses unicast of ARP requests. In communications networks, unicast is used to transmit a message to one receiver, typically from a server to a workstation. In unicast, even though multiple users might request the same data at the same time, duplicate data streams are transmitted, one to each user.

Claim 14 of the present invention recites a method of selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP layer and a network layer to a plurality of workstations by the intermediary of an IP network and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers comprising two method steps. In step 1, an ARP request is unicast to all candidate routers selected from the set of routers. In step 2, instructions are transmitted to all IP hosts to update their ARP table with router availability information. The Examiner states that *Li* discloses step 1 and cites *Li*, column 1, line 65-column 2, line 8 (Background of *Li*) and column 16, lines 1-7. In the Background, *Li* discusses various ways the prior art has addressed providing for back-up routers in the case a primary router fails. In this recitation, *Li* does not teach or suggest that ARP requests are unicast to candidate routers. In column 16, lines 1-7, *Li* is continuing his discussion about address filtering, where *Li* states that "some router controllers support address filtering for only one unicast MAC address." *Li* is describing how these types of router controllers can be used with his invention if the resulting problems caused by changing an interfaces primary MAC address is solved by having the router send out gratuitous ARP packets. In column 2, lines 1-7, *Li* describes how these gratuitous ARP packets are used by other entities to update their ARP tables to reflect that the router is now using *Li's* group virtual MAC address rather than its primary MAC address. The Applicant asserts that nowhere in this recitation does *Li* teach or suggest step 1 of Claim 14.

The Examiner states that *Li* teaches step 2 of Claim 14 and cites *Li*, column 2, lines 3-7. As stated earlier, in column 2, lines 1-7, *Li* describes how these gratuitous ARP packets are used by other entities to update their ARP tables to reflect that the router is now using *Li's* group virtual MAC address rather than its primary MAC address. Nowhere in this recitation does *Li* teach or suggest transmitting instructions to all IP host to update their ARP table with router availability information. *Li* does not provide information on router availability, rather the invention of *Li* is directed to using a group of routers with a single virtual address which is assigned to an active one of this group.

If the active one becomes inoperative, *Li* automatically assigns another router from this group to begin emulation of the active router. See *Li*, column 2, Summary of Invention. *Li* does not describe or suggest a method for allowing Hosts to periodically update their ARP tables with router availability data indicating which of a group of routers are available for use by the Host. The Applicant asserts that *Li* does not teach or suggest the invention of Claim 14. Therefore, the Applicant asserts that the rejection of Claim 14 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons.

Amended Claim 15 is dependent from Claim 14 and contains all the limitations of Claim 14. Claim 15 adds the limitation that the availability information used to update the ARP table in all IP hosts is the MAC address of a candidate router that is available and has answered the unicast ARP request. The Examiner states that *Li* teaches the invention of Amended Claim 15 and cites *Li*, column 16, lines 1-7. A MAC address is a specific hardware address for a device, in this case, a candidate router. The Applicant is not claiming invention of a MAC address, rather the Applicant is claiming the method of Claim 14 wherein the availability information that is used to update the Host ARP tables contain the MAC address of an available candidate router that has responded to the periodic unicast ARP request sent in step 1 of Claim 14. The mere mention that a router has a "primary MAC address" does not teach or suggest the invention of Claim 15. Therefore, the Applicant respectfully asserts that the rejection of Claim 14 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons and for the same reasons as Claim 14.

Amended Claim 16 is dependent from Claim 15 and contains all the limitations of Claim 15. Claim 16 adds the limitation that the IP hosts update their ARP table when the IP hosts receive the MAC address of the candidate router that is available and has answered the unicast ARP of Claim 14. The Examiner again cites *Li*, column 16, lines 1-7. As stated earlier, this recitation concerns *Li*'s continuing discussion about address filtering. *Li* only states that "gratuitous ARP packets are used by other entities to update

their ARP tables to reflect that the router is now using” *Li*’s group virtual MAC address rather than its primary MAC address. Nowhere in this citation does *Li* teach or suggest the limitation of Claim 16. Therefore, the Applicant respectfully asserts that the rejection of Claim 16 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons and for the same reasons as Claim 15.

Amended Claim 17 is dependent from Claim 14 and contains all the limitations of Claim 14. Claim 17 adds the limitation that said router availability information is a default value of a MAC address of an available candidate router. The Examiner states that *Li* discloses the invention of Claim 17 and cites *Li*, column 1, line 51-column 2, line 8. In this recitation, *Li* does not mention a MAC address. The Applicant has shown that *Li* does not teach or suggest the method of Claim 14 wherein the Examiner cited *Li*, column 1, line 51-column 2, line 8. In this recitation, *Li* refers only to a default router which cannot be construed to be a default value of a MAC address of an available candidate router. Therefore, the Applicant respectfully asserts that the rejection of amended Claim 17 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons and for the same reasons as Claim 14.

Amended Claim 18 is dependent from Claim 17 and contains all the limitations of Claim 17. Amended Claim 18 adds the limitation that the IP hosts update their ARP table by removing a MAC address of a router when the router is determined to be unavailable. The Examiner states that *Li* discloses the invention of amended Claim 18 and cites *Li*, column 12, lines 61-66. In this recitation, *Li* is discussing action taken when an active router (according to *Li*) receives an acceptable “coup message” wherein it resigns its status as the active router. Resigning an active router status, according to this recitation of *Li*, involves removing the group MAC address from its address filter then unicasting a resign message to the sender of the coup message. The Applicant asserts that there is no relationship between this recitation of *Li* and the invention of Claim 18 except the term “removing.” The Applicant asserts that this recitation of *Li* does not teach or suggest the invention of amended Claim 18. Therefore, the Applicant

respectfully asserts that the rejection of amended Claim 18 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons and for the same reasons as Claim 17.

Amended Claim 19 is dependent from amended Claim 17 and contains all the limitations of amended Claim 17. Claim 19 adds the limitation that the candidate router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from the router monitoring device. The Examiner states that *Li* discloses the invention of Claim 19 and cites *Li*, column 1, lines 25-29. In this recitation, *Li* is discussing prior art protocols for allowing a host to choose among routers in a network. *Li* goes on to name two of these protocols as examples of dynamic participation by a host. The Applicant does assert that there is no disclosure concerning routers being unavailable when they fail to answer three monitoring requests from a router monitoring device in this recitation. The Applicant asserts that this recitation of *Li* does not teach or suggest the invention of amended Claim 19. Therefore, the Applicant respectfully asserts that the rejection of amended Claim 19 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the above stated reasons and for the same reasons as Claim 17.

Claim 20 adds essentially the same limitation to Claim 18 as Claim 19 adds to Claim 17. The Application has shown that *Li* does not anticipate Claim 18 and therefore the Applicant asserts that the rejection of Claim 20 under 35 U.S.C. §102(b) as being anticipated by *Li* is traversed for the same reasons as Claim 18.

Claims 1-13 are directed to a data transmission system for transmitting packet data from an Internet Protocol (IP) host comprising an IP layer, a network layer adaptable for coupling to a plurality of workstations by an intermediary of an IP network, wherein the IP host is coupled to the IP network via a layer 2 network, the layer 2 network interfacing the IP network with a set of routers, a network dispatcher, the network dispatcher coupled to the IP network and operable for receiving all incoming data flows from the workstations and dispatching them to the cluster of hosts, a monitoring device,

the monitoring device monitoring the information defining availability of the routers, and a broadcasting device, wherein the broadcasting device broadcasts the router availability information to each host of the cluster of hosts via the network dispatcher. Claim 1 is an apparatus claim that does not have the same limitations as Claim 14 and therefore Claims 2-13 have different limitations than Claims 15-19. The Applicant respectfully asserts that the Examiner has not made a *prima facie* case of anticipation under 35 U.S.C. §102(b) and therefore the rejections of Claims 1-13 are traversed.

Claims 21-27 are directed to a computer program product embodied in a machine readable medium, including a programming method for selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP layer and a network layer to a plurality of workstations by the intermediary of an IP network and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers comprising, a program of instructions for performing the method steps of sending periodically a unicast ARP request to all candidate routers, said candidate routes selected from said set of routers, and transmitting to all IP hosts instructions to update their ARP table with router availability information. Claims 21-27 are directed to a program product that performs the method steps of Claims 14-20. Since the Examiner rejected Claims 21-27 for the same reasons as Claims 14-20, the Applicant respectfully asserts that the rejections of Claims 21-27 under 35 U.S.C. §102(b) as being anticipated by *Li* are traversed for the same reasons as Claim 14-20.

IV. CONCLUSION

The Applicant has traversed the rejections of Claims 14 and 20 under 35 U.S.C. § 112 as being indefinite.

The Applicant has traversed the objection of Claim 20.

The Applicant has traversed the rejections of Claims 1-27 under 35 U.S.C. § 102(b) as being unpatentable.

The Applicants, therefore, respectfully assert that Claims 1-27 are now in condition for allowance and request an early allowance of these claims.

Applicant respectfully requests that the Examiner call Applicant's attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

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